

plane had not arrived. After waiting up to 7.00 p.m. we were told that the flight to Malta had been cancelled, so the only alternative was to take the 10.00 p.m. boat from Syracuse to Malta.

My thanks are due to Sig. S. Distefano and to Prof. M. La Greca the director of the Istituto Policattedra di Biologia Animale, for their valuable help.

257 Msida Stret. B'Kara, Malta. 30th June, 1971

## A Review of the Butterflies in the Bristol Area

By A. D. R. BROWN, F.R.E.S.

(Continued from page 216)

### RIODINIDAE

*Hamearis lucina* Linn. (Duke of Burgundy Fritillary)

Although once widely distributed across the Cotswold escarpment, this species is now restricted to several specific localities. Two of these are known to the author, the first of which is threatened by sight-seers, since it is a typical beauty-spot overlooking the Severn Estuary and the mountains of Wales beyond. Picnickers trample down the breeding grounds on every sunny weekend, and never more than three butterflies have been noted on any one occasion. The other haunt of the Duke of Burgundy Fritillary is situated on the edge of a golf course where the grass is rarely cut, small conifer trees are planted at intervals and many unusual plants live here, including several species of Orchis. About a dozen butterflies were observed at this locality about two years ago, but the habitat is restricted, and is quite vulnerable.

We have a single record for the species from North Somerset, with eight butterflies being observed at Goblin Combe in May 1964, but despite frequent searches since that time, no other butterflies have been seen.

### LYCAENIDAE

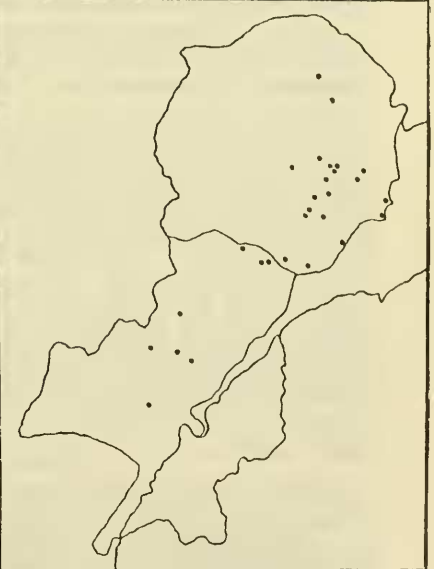
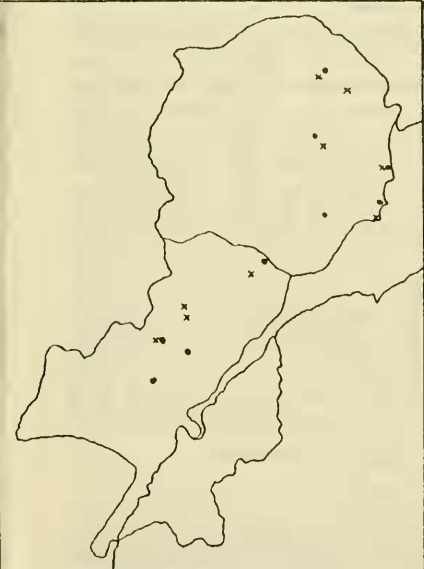
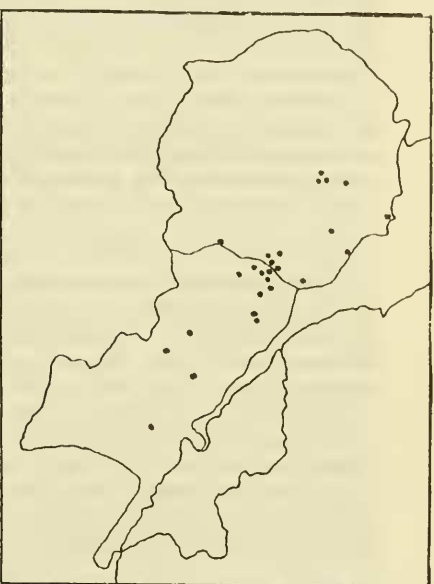
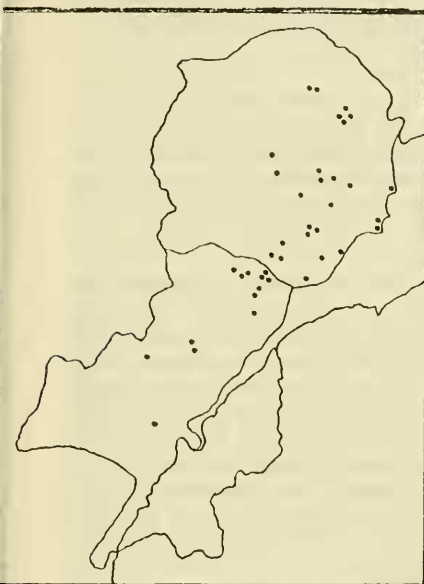
*Aricia agestis* Schiff. (Brown Argus)

As with the species just described, the Brown Argus is mainly confined to the western slopes of the Cotswold Hills in Gloucestershire, where its colonies are none too strong. At Kingsweston Down just to the north of Bristol, a few of these butterflies are seen each year, despite frequent clearing of the long grass.

In North Somerset the Brown Argus occurs in a wide variety of habitats, where it also flies in greater numbers. Once again, Goblin Combe is one of the strongholds, while

*Aricia agestis* Schiff.  
Brown Argus

● *Lysandra coridon* Poda  
(Chalkhill Blue)  
× *Lysandra bellargus* Rott.



*Celastrina argiolus* L.  
(Holly Blue)

*Lycaena phlaeas* L.  
(Small Copper)

the other colonies seem to be centred around the western end of the Mendip Hills, in places such as Cheddar and Crook Peak near Weston-super-Mare. The Somerset moors provide another habitat for this species, although our knowledge of its distribution in that area is very incomplete at present.

*Cupido minimus* Fuessl. (Small Blue)

Unfortunately, we have very little information concerning the Small Blue, but we have reason to believe that it is quite widespread throughout the Cotswold Hills. In Somerset it is common on the hills around Weston-super-Mare, but no other localities in this vice-county have been reported to us.

*Polyommatus icarus* Rott. (Common Blue)

The Common Blue is widespread and may be observed in a variety of habitats over the two vice-counties. In West Gloucestershire, it is particularly common at Wetmoor near Wickwar and along the entire range of the Cotswolds. The western end of the Mendip Hills appear to be another good locality for this species, where there are extensive areas of open limestone downlands with well-cropped turf and an abundance of flora. Further east, too, around the abandoned lead-mines at Priddy and Charterhouse, the butterfly is met with in considerable numbers. There appears to be little in the way of local variation.

*Lysandra coridon* Poda (Chalkhill Blue)

As far as Gloucestershire is concerned, our knowledge regarding the distribution of the Chalkhill Blue is far from complete. At present, the Gloucestershire Trust for Nature Conservation is sponsoring a scientist to study this species and its ecology along with the Large Blue (*Maculinea arion* Linn.), the Adonis Blue (*Lysandra bellargus* Rott.) and Small Blue (*Cupido minimus* Fuessl.). We know for certain that there is considerable scope for variation within the colonies of the Cotswold Hills, owing to the abundance of this butterfly in some years.

In North Somerset the Chalkhill Blue occurs in several places along the south side of the Mendips, and also on the Polden Hills near Street. Along the coastal areas around Weston-super-Mare, this species is seen every year. It is feared, however, that this butterfly is on the decline as it is elsewhere in the country, due to the cultivation and destruction of habitats, particularly for farming purposes.

*Lysandra bellargus* Rott. (Adonis Blue)

From the map it appears that the Adonis Blue is more widely distributed than its cousin the Chalkhill Blue (*Lysandra coridon* Poda), but this is probably not the case and is rather misleading. We seriously doubt the validity of some of our records, owing to the places where it is claimed to have been observed. In fact, the foodplant, Horseshoe Vetch, has been

totally absent in some cases, and it is more likely that this butterfly has been confused with the Common Blue (*Polyommatus icarus* Rott.), which may sometimes be very bright in colour.

Starting with West Gloucestershire, four males were seen in September of the year 1963 near Wotton-under-Edge, but despite regular searches since that date there has been no sign whatsoever of the Adonis Blue. A number of years ago, a large number of pigs were released onto the hillside to graze, but the damage that they caused was quite phenomenal and the greater part of the breeding grounds was totally ploughed up. The pigs are no longer there, but it is without doubt that this caused the eradication of the Adonis Blue from that particular locality. As can be expected, the strength of the Chalkhill Blue colony at this place was reduced considerably. We have been sent in other observations of the Adonis Blue from the region around Wickwar, but we have yet to check up on this. This species very likely occurs in many other places in the Cotswold Hills, but the present survey being carried out will reveal the extent of its distribution in this area to a greater degree.

In North Somerset regular reports come in of sightings along the coast near Weston-super-Mare. The habitat appears suitable enough but we still doubt these observations due to the abnormal times during which this butterfly has been noted. Further reports are of sightings near the Cheddar Gorge in the Mendip Hills and also from a Roman encampment south of Clevedon, and we believe these to be correct.

Unfortunately, the Adonis Blue is obviously on the decline in the Bristol area as elsewhere in the country, and every effort is needed to protect it.

#### *Celastrina argiolus* Linn. (Holly Blue)

Although very widespread, the Holly Blue is never common and is usually observed in ones and twos. The greater part of our records comes from within Bristol itself, and in a few places it appears to be on the increase. Little more can be said than that, since we have no idea what controls the strength of this species in the Bristol area. Its various food-plants are abundant nearly everywhere, and the only possible explanation is the dependence upon the weather conditions, which are on the whole mild and damp in comparison with the rest of the country.

#### *Lycæna phlaeas* Linn. (Small Copper)

This species, like the Holly Blue (*Celastrina argiolus* Linn.), is scattered widely over the two vice-counties but is rarely seen in any substantial numbers.

Nowhere in West Gloucestershire is it common other than the north of Bristol. At Kingsweston Down, a healthy brood is observed in each generation every year, with a good proportion of ab. *caeruleo-punctata*, the form with a series of blue

markings on the hindwings. Sorrel, being the larval food-plant abounds here, since the grass is cut back each year and there also being a large number of anthills in the vicinity. In an orchard not far away, the Small Copper is equally plentiful, even though cattle are regularly allowed to graze there. This butterfly is often bred by the author, from larvae collected in a number of localities, and it is of interest that the above-mentioned variation appears in as much as eighty or ninety per cent of the resulting brood.

In the Mendip Hills, the Small Copper occurs in the famous areas around Priddy and Charterhouse with an equal proportion of aberrations, but its numbers have reduced drastically in the former locality. At Shipham, near the western end of these hills, this species was common in the years 1965 and 1968, but it was much scarcer in 1969.

On the whole, the prospects look good for the Small Copper in our part of the world, its only real enemies being disease and parasites.

## Notes on Some of the British Nepticulidae

By Lieut. Col. A. M. EMMET, M.B.E., T.D., M.A., F.R.E.S.

(continued from p. 171)

### MALUS (Apple)

We have six apple-feeding species, viz., *Stigmella aëneella* Hein., *S. desperatella* Frey, *S. malella* Stt., *Nepticula pomella* Vaughan, *Dechtira atricollis* Stt. and *Etainia (Dechtiria) pulverosella* Stt. On this occasion I shall confine my remarks to the last two.

*Etainia pulverosella* is now assigned to the same genus as our three species which feed on the wings and seeds of maple and sycamore (*E. sericopeza* Zell., *E. sphenamni* Hering and *E. decentella* H.-S.). Both in the markings of the imago and the life-history it is the odd man out. Feeding in apple leaves, the larva makes a short gallery soon opening into a blotch, which is nearly always situated at the leaf-margin. The single generation comes early in the year; Ford (1949) is accurate in giving mid-June to early July for the larvae, but in forward seasons they may all have gone by the end of June. This is one of the easiest of the univoltine species to rear, the larvae spinning up readily between leaves or on tissue. I have found mines in all the areas where I have collected microlepidoptera in the south-east of England, though normally in limited numbers. Meyrick (1928) gives the distribution as "England to York, rather local"; it also occurs in the west of Ireland, in Co. Galway and the Burren.

*D. atricollis* makes a very similar mine, not only on apple, but also on hawthorn (most commonly), pear and cherry. According to Meyrick (1928) and Waters (1924) there is only one generation of larvae in the autumn, but Tutt (1899) and Ford (1949) state there is also an earlier one in July, and Hering